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EXAMINER

SONG, HOSUK

ART UNIT PAPER NUMBER

2135

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Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 40-41,43-45,47,52-53,55-57,59,64,66-72,74-75,80-81,83-84,91-94 are rejected under 35 U.S.C. 102(b) as being anticipated by Delayaye et al(US 4,751,733).

Claims 40,41,52: Delayaye disclose in response to a permutation instruction alternately selecting a first subword from a first sequence of subwords in a first register and a second subword from a second sequence of subwords in a second register(fig.1 and col.3,lines 25-38) and concatenating selected first subword and the selected second subword into a third sequence of subwords in a third register in (fig.3 and col.4,lines 45-56).

Claim 53: Delayaye disclose alternately selecting a first subword for each of subwords in first sequence of subwords and each of subwords in second sequence of subwords in (col.2,lines 33-55).

Claims 43,55: Delayaye disclose subword comprises one or more bits in (col.5,lines 45-49).

Claims 44,71: Delayaye disclose swapping a first subword in a first register with a second subword in a sequence of subwords in a second register and concatenating the swapped first subword(fig.1 and col.3,lines 25-38) and second subword into a second sequence of subwords in a third register in (fig.3 and col.4,lines 45-56).

Claim 72: Delayaye disclose alternately selecting a first subword for each of subwords in first sequence of subwords and each of subwords in second sequence of subwords in (col.2,lines 33-55).

Claim 45: Delayaye disclose step of repeating swapping step for each subwords in sequence of subwords in (col.6,lines 2-15).

Claim 47: Delayaye disclose subword comprises one or more bits in (col.5,lines 45-49).

Claims 56,67,69: Delayaye disclose conditionally swapping a first subword with a second subword in a sequence of subwords dependant on permutation control bits in a first register(fig.1 and col.2,lines 60-65) and concatenating the swapped first subword and second subword into a second sequence of subwords in a second register in (col.3,lines 50-63).

Claim 57: Delayaye disclose repeating conditionally swapping step for each of subwords in sequence of subwords in (col.6,lines 2-15).

Claim 59; Delayaye disclose each subword comprises one or more bits in (col.5,lines 45-49).

Claim 64: Delayaye disclose defining a size of subword and defining a subset of subwords in sequence of subwords in (fig.1). Delayaye disclose swapping a first subword in subset in a first register with a second subword in a sequence of subwords in a second register and concatenating the swapped first subword and second subword into a second sequence of subwords in a third register and repeating swapping step for consecutive subsets of subwords in (col.3,lines 25-58).

Claim 66: Delayaye disclose each subword comprises one or more bits in (col.5,lines 45-49).

Claims 68,70: Delayaye disclose odd elements of first subword and odd elements of second subword are 32-bit subwords, 16-bit subwords or 8-bit subwords and first subword and second subwords are 64-bit subwords in (fig.1 and col.2,lines 43-68).

Claims 74,80: Delayaye disclose swapping a first subword in a first register with a second subword in a sequence of subwords in a second register in (fig.1 and col.3,lines 25-38) and concatenating the swapped first subword and second subword into a second sequence of subwords in a third register in (fig.3 and col.4,lines 45-56).

Claim 75: Delayaye disclose swapping for each of subwords in sequence of subwords in (col.2,lines 33-55).

Claim 81: Delayaye disclose conditionally selecting a first subword for each of subwords in first sequence of subwords and each of subwords in second sequence of subwords in (col.2,lines 33-55).

Claim 83: Delayaye disclose in response to a permutation instruction, conditionally swapping a first subword in a first register with a second subword in a sequence of subwords in a second register dependant on permutation control bits in ( fig.1 and col.3,lines 25-38; col.2,lines 60-65) and concatencating the swapped first subword and second subword into a second sequence of subwords in a third register in (fig.3 and col.4,lines 45-56).

Claim 84: Delayaye disclose conditionally swapping for each of subwords in sequence of subwords in (col.6,lines 2-15).

Claims 91,93:Delayaye disclose in response to a permutation instruction conditionally concatenating one or more odd elements of a first subword in a first register sequentially with one or more second odd elements of a second subword in a second register in (fig.1 and col.2,lines 60-65; col.3,lines 50-63).

Claims 92,94: Delayaye disclose odd elements of first subword and odd elements of second subword are 32-bit subwords, 16-bit subwords or 8-bit subwords and first subword and second subwords are 64-bit subwords in (fig.1 and col.2,lines 43-68).

***Allowable Subject Matter***

2. Claims 1,3-22,24-39,48-51,60-63,77-79,86-90 are allowed.
3. Claims 42,46,54,58,65,73,76,82,85 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Previous Claim Rejections - 35 USC § 101 has been withdrawn in view of applicant's arguments. However, applicant's amendment necessitated new grounds of rejection. New rejections are presented above.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***USPTO Contact Information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hosuk Song whose telephone number is 571-272-3857. The examiner can normally be reached on Tue-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2135

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HS



Hosuk Song  
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Art Unit 2135